

Remarks

Claims 22-44 are pending in this application. Applicants have amended claims 22 and 37 to clarify the claimed invention. Applicants respectfully request favorable reconsideration of this application.

Applicants have amended claims 22 and 37 to recite that gas including the precipitant is fed inside the precipitation reactor in order to form a gas space inside the precipitation reactor, that the fiber suspension is dispersed in drops or particles into the gas space of the precipitation reactor, and that the dispersed and activated fiber suspension is brought into contact with the precipitant of the reactive mineral material in the gas space of the precipitation reactor in order to at least partly precipitate the reactive mineral material, whereby at least some of the thus formed precipitated mineral material is precipitated onto the fibers. These amendments are supported by paragraphs 0027, 0030, 0085 and 0086 of the specification, among other passages.

The claimed invention makes possible extremely fast and complete precipitation reactions because the suspension including fibers and calcium hydroxide is dispersed in drops into the gas phase of the precipitation reactor.

The Examiner rejected claims 22-25 and 29-36 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 5,223,090 to Klungness et al. in view of U.S. patent 6,416,727 to Virtanen and Smook. The Examiner rejected claims 26-28 and 37-43 under 35 U.S.C. § 103(a) as being unpatentable over Klungness et al. in view of Virtanen and Smook and further in view

of WO 96/18454.

The combination of Klungness et al. Virtanen and Smook does not suggest the invention recited in claims 22 or 37 since, among other things, the combination does not suggest forming a gas space inside a precipitation reactor before feeding a fiber suspension into the precipitation reactor. Rather, Klungness suggests the precipitation of calcium carbonate in a fiber suspension in such a way that carbon dioxide is fed into the suspension, as described at col. 8, lines 41-51. The Examiner has acknowledged that Klungness does not suggest dispersing a fiber suspension in drops or particles into a precipitation reactor and, thus, does not suggest dispersing the fiber suspension into a gas phase of a precipitation reactor.

Virtanen also does not suggest forming a gas space inside a precipitation reactor before feeding a fiber suspension into the into the precipitation reactor. Virtanen suggests a process for precipitating calcium carbonate. The precipitation is not carried out so that calcium hydroxide mist is fed into the gas phase of the precipitation reactor. Rather, calcium hydroxide and carbon dioxide are fed into the reactor, or pin mill, at the same time, as described at col. 4, lines 49-51. Thus, Virtanen does not suggest a gas phase inside the reactor. It follows that Virtanen does not suggest feeding a fiber suspension in the gas phase in order to precipitate the calcium carbonate onto fibers.

Furthermore, it would not have been obvious to combine Klungness and Virtanen since, among other things, Virtanen does not suggest a method that includes fibers or a fiber suspension. In fact, the invention as recited in claims 22 or 37 includes forming, activating, and

dispersing a fiber suspension, utilizing the fiber suspension in a precipitation. On the other hand, as discussed at col. 1, lines 20-23, Virtanen suggests that precipitated calcium carbonate obtained from the process can be used as a paper filling or coating agent. Therefore, Virtanen suggests a conventional use of filler particles. Thus, Virtanen does not reveal anything which would lead one skilled in the art to apply the process in fibers. In fact, the word "fiber" does not appear anywhere in the specification of Virtanen.

Smook only suggests calendering, sizing and coating. Smook does not suggest forming a gas space inside a precipitation reactor before feeding a fiber suspension into the precipitation reactor. As a result, Smook does not overcome the deficiencies of Klungness and Virtanen and does not provide any teaching, motivation or suggestion to combine Klungness and Virtanen or the expected results achieved according to the invention as recited in claim 22.

Similarly, WO 96/18454 only suggests a speed at which a pin mill may be operated. WO 96/18454 does not suggest forming a gas space inside a precipitation reactor before feeding a fiber suspension into the precipitation reactor. As a result, WO 96/18454 does not provide any teaching, motivation or suggestion to combine Klungness and Virtanen or the expected results achieved according to the invention as recited in claims 22 or 37.

In view of the above, the references relied upon in the office action, whether considered alone or in combination, do not suggest patentable features of the present invention. Therefore, the references relied upon in the office action, whether considered alone or in combination, do not make the present invention obvious. Accordingly, Applicants submit that the present

invention is patentable over the cited references and respectfully request withdrawal of the rejections based on the cited references.

If an interview would advance the prosecution of this application, Applicants respectfully urge the Examiner to contact the undersigned at the telephone number listed below.

The undersigned authorizes the Commissioner to charge fee insufficiency and credit overpayment associated with this communication to Deposit Account No. 22-0261.

Respectfully submitted,

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